MASTER OF SCIENCE IN LEADERSHIP AND HUMAN RESOURCE DEVELOPMENT

**THE RELATIONSHIP BETWEEN ACADEMIC MAJOR AT THE UNITED
STATES NAVAL ACADEMY AND SERVICE COMMUNITY SELECTION**
Brian K. Arcement-Lieutenant, United States Navy
B.B.A., University of New Mexico, 1991
Master of Science in Leadership and Human Resource Development-September 1998
Advisors: Gregory G. Hildebrandt, Department of Systems Management
Rakesh Lall, Department of Leadership, Ethics and Law, United States Naval Academy

This study provides information for those individuals responsible for guiding midshipmen's choice of naval service community. This research focused on individuals who received their first community choice. The analysis demonstrates that choice of academic major frequently affects the likelihood that an individual will select a particular community. For example, a shift from a group one major to a group two major significantly decreases the likelihood of selecting Marine Corps. Another finding is that a shift from group one major to either group two or group three majors decreases the likelihood of selecting submarines. The fact that it is possible to predict community choice from academic major may not be obvious to midshipmen when they choose their major during the second semester of their plebe year (United States Naval Academy, 1997).

This project was designed to provide company officers with the information needed to counsel midshipmen about the service community available following graduation from the Naval Academy. The choice of career field is the culmination of four years of hard work by midshipmen, and this decision can affect their naval service career for many years. This information needs to be provided to the people involved in the major and community selection process. This should be done prior to the midshipmen choosing their academic major.

MASTER OF SCIENCE IN LEADERSHIP AND
HUMAN RESOURCE DEVELOPMENT

POST-COLD WAR PERSONNEL TEMPO (PERSTEMPO) POLICIES
AND CHALLENGES: AN EXAMINATION OF THE BASELINE
ENGAGEMENT FORCE ASSESSMENT AND MODEL

Wayne G. Grasdock-Lieutenant, United States Navy
B.S., United States Naval Academy, 1993
Master of Science in Leadership and Human Resource Development-September 1998
Advisors: Richard B. Doyle, Department of Systems Management
Walter Owen, Department of Systems Management

This thesis addresses policy and analytical challenges associated with the Post-Cold War personnel tempo (PERSTEMPO). It examines a study conducted by the Joint Staff called the Baseline Engagement Force (BEF) Assessment. The majority of the data were obtained from the Force Structure, Resources, and Assessment Directorate (J-8) of the Joint Staff. The BEF assessment determined the level of military effort required to support peacetime engagement demands and revealed that PERSTEMPO reporting among the Services is diverse in that reporting and tracking methods and concepts differ. Misunderstanding of reporting and tracking methods and concepts led to under-reporting of PERSTEMPO. Errors, by a factor of ten, consistently occurred when reporting PERSTEMPO to the Secretary of Defense and the Chairman of the Joint Chiefs of Staff. Another finding was that the current PERSTEMPO is placing heavy demands on the deployable pool, rather than the end strength. PERSTEMPO increases by twelve percent when the deployable pool is placed in the denominator when calculating deployment percentages. The Assessment also revealed that there is no tool for the services to conduct real time assessments of PERSTEMPO. To make these assessments, a Baseline Engagement Force Model was developed by the RAND Corporation and the Systems Research and Applications (SRA) Corporation for the Joint Staff. This Model was designed to produce alternatives for reducing the impact of deployments on military members and to help determine policy regarding the capabilities of the unit deployment and personnel management process.

DoD KEY TECHNOLOGY AREA: Manpower, Personnel, and Training

KEYWORDS: OPTEMPO, PERSTEMPO, Baseline Engagement Force Assessment, Baseline Engagement Force Model, Readiness, All-Volunteer Force, National Security Strategy, National Military Strategy, Quadrennial Defense Review

UNDERGRADUATE ACADEMIC ACHIEVEMENT AS AN
INDICATOR OF FLEET PERFORMANCE AND RETENTION

John D. Gremillion-Lieutenant, United States Navy
B.S., United States Naval Academy, 1993
Master of Science in Leadership and Human Resource Development-September 1998
Advisors: Alice Crawford, Department of Systems Management
Gregory G. Hildebrandt, Department of Systems Management

This research analyzes the relationship between academic performance and fleet performance and retention of United States Naval Academy (USNA) graduates. Linear and LOGIT regression models are developed for USNA classes of 1980 through 1985 to analyze the effect of explanatory variables on the measures of occupational success, fitness reports (FITREPs) and retention in the Navy.

Understanding the relationship between college academic performance and job performance is important because of the organizational and cultural emphasis placed on academic grades. At the Naval Academy, high academic performance affords midshipmen extra privileges and, most importantly, precedence for service selection.

Analysis of academic factors and several other explanatory variables, both academic and military, shows that academics account for only a small percent of the variation in fitness report grades. Subjective

criteria, such as military performance grades, proved much more predictive than course grades for both performance and retention. This study recommends that the component weighting of the order of merit calculation be revisited. That way, midshipmen and Naval Academy focus is realigned to emphasize factors predicting occupational success.

DoD KEY TECHNOLOGY AREA: Other (Human Resources)

KEYWORDS: Military Officers, U.S. Naval Academy, Retention, Academics

LEADERSHIP SELECTION AT THE U.S. NAVAL ACADEMY:
AN ANALYSIS OF BRIGADE LEADERS AND THEIR FLEET SUCCESS
Eric J. Micheli-Lieutenant, United States Navy
B.S., United States Naval Academy, 1989
Master of Science in Leadership and Human Resource Development-September 1998
Advisors: Alice Crawford, Department of Systems Management
Gregory Hildebrandt, Department of Systems Management

This research analyzes the selectivity and career success of midshipmen leaders from the United States Naval Academy. Those studied are former midshipmen from the classes of 1980 through 1985 who were carefully screened by USNA's leadership selection process to hold significant leadership positions in their final year at the Academy. Using data compiled from several sources, non-linear logistic regression methodology is employed to determine statistically significant factors for selection and whether such individuals have a statistical advantage in later promotion as officers. Qualitative data in the form of surveys are used to analyze current midshipmen satisfaction with the selection process and recent midshipmen leaders. Results indicate that these midshipmen leaders were the most promising candidates for admission to the Academy and the most successful midshipmen in all areas of performance, especially academics and military conduct grades. They also are found, as a whole, to have a higher promotion rate at the Commander promotion board. However, analysis of the views of recent midshipmen and midshipmen leaders indicates that other measures, such as peer and subordinate evaluations, may improve the process of identifying the most promising leaders and role models for the Brigade of Midshipmen and the U.S. Navy.

DoD KEY TECHNOLOGY AREA: Manpower, Personnel, and Training

KEYWORDS: Leadership Selection, Leadership Assessment, Military Officers, Officer Promotion, U.S. Naval Academy, Commissioning Sources

DETERMINANTS OF FLIGHT TRAINING PERFORMANCE:
NAVAL ACADEMY CLASSES OF 1995 AND 1996
Paul M. Reinhart-Lieutenant, United States Navy
B.S., United States Naval Academy, 1991
Master of Science in Leadership and Human Resource Development-September 1998
Advisors: Gregory G. Hildebrandt, Department of Systems Management
Roger D. Little, Department of Economics, United States Naval Academy

This thesis investigates the relationship between observable characteristics and performance during the primary stage of flight training. The data for this study consists of 272 observations from Naval Academy graduates in the classes of 1995 and 1996. Analysis of the variables was conducted using the Heckman two-stage regression technique to correct for possible selectivity bias. In this technique a first-stage probit model, which predicts the likelihood of primary phase completion, is used to generate a correction factor

for possible selectivity bias. The correction factor is then used in the second-stage adjusted least-squares regression model. The conclusions of this study are: The biographical inventory from the Aviation Selection Test Battery (ASTB) is a valid predictor of primary phase completion. The Pilot Flight Aptitude Rating (PFAR) from the ASTB, academic achievement (AQPR) at the Naval Academy, and previous flight experience are all valid predictors of flight training performance. Additionally, it appears that sample selection bias does not seem to be a problem in this analysis.

DoD KEY TECHNOLOGY AREA: Manpower, Personnel, and Training

KEYWORDS: Naval Academy, Pilot Selection, Flight Training, Selectivity Bias

FEMALE HEALTH AND PHYSICAL FITNESS AT THE NAVAL ACADEMY

Trevis L. Stamper-Lieutenant, United States Navy
B.A., Otterbein College, 1991
Master of Science in Leadership and Human Resource Development-September 1998
Advisors: Gregory G. Hildebrandt, Department of Systems Management
David W. Armstrong, Midshipmen Health Studies United States Naval Academy
Second Reader: Reuben T. Harris, Department of Systems Management

Stress related health disorders may be an indication that some female midshipmen at the Naval Academy are making exceptional efforts to meet specified physical performance standards. The stress at the service academies is much higher than in many civilian occupations and may increase the risk of females developing gender related health problems such as amenorrhea, bone loss, and eating disorders. The purpose of this research is to shed some light on ways in which gender related health problems can be decreased while improving the overall quality of midshipmen at the Naval Academy. First, a comparison of male versus female exercise patterns and performance is provided. In order to identify risk factors, hypotheses testing procedures are used to examine the relationship between female health disorders and selected explanatory variables. Recognizing risk factors early can also reduce the risk of gender related problems long after midshipmen have graduated. Lessening the amount of injuries now can prevent health problems that develop by middle age, and will also help reduce the cost of medical compensation later in an officer's life.

DoD KEY TECHNOLOGY AREA: Manpower, Personnel, and Training

KEYWORDS: Female, Health, Physical Fitness, Naval Academy